

Serial No.: 10/725,375

IN THE CLAIMS:

1. (Currently Amended) A motor comprising:

a housing;

a stator (10) having inner circumference, comprising:

an annular yoke (16), a plurality of teeth; teeth (12)
disposed at an inner circumferential portion of the yoke and

a stator core having a plurality of slots, each two adjacent
teeth having a slot therebetween, (11) formed with slots (13)
between the plurality of teeth, with three-phase concentrated
winding wires (14U, 14V, 14S) provided to wound around a portion
of each of the teeth, said stator having an outer circumferential
surface partially in contact with and held by the housing; and

a rotor (20) having an axis of rotation and rotatably held
in an opposed relation to an the inner circumference of said
stator (10) via with a small clearance therebetween, and provided
with comprising permanent magnets (22) inside embedded in or on a
surface of the rotor core; rotor;

said stator core (11) having an outer circumference partly
being in close contact with and held by a housing (31),

Serial No.: 10/725,375

wherein ~~the yoke (16) located adjacent to outer circumferences of the teeth (12) is provided with axially penetrating through-holes (17),~~ the stator has a plurality of grooves in the outer circumferential surface of the stator and extending parallel to said axis of rotation and throughout the axial thickness of the stator, each of said grooves being radially outward of one of said teeth. ~~and the outer circumference of the stator core (11) located adjacent to outer circumferences of the through-holes (17) is in close contact with the housing (31).~~

2. (Currently Amended) A motor comprising:

a housing;

a stator (10) having an inner circumference comprising:

an annular yoke (16), a plurality of teeth (12) disposed at an teeth; inner circumferential portion of the yoke and

a stator core (11) formed with having a plurality of slots (13) between the plurality of teeth, slots, each two adjacent teeth having a slot therebetween, with three-phase concentrated

Serial No.: 10/725,375

winding wires ~~(14U, 14V, 14S)~~ provided to wound around a portion of each of the teeth, said stator having an outer circumferential surface partially in contact with and held by the housing; and

a rotor ~~(20)~~ having an axis of rotation and rotatably held in an opposed relation to an the inner circumference of said stator (10) via with a small clearance therebetween, and provided with comprising permanent magnets (22) inside embedded in or on a surface of the rotor core; rotor;

~~said stator core (11) having an outer circumference partly being in close contact with and held by a housing (31),~~

wherein a notch (18) is formed at an outer circumference of the yoke located adjacent to an outer periphery of the slot (13) the stator has a plurality of notches in the outer circumferential surface of the stator and extending parallel to said axis of rotation and throughout the axial thickness of the stator, each of said notches being radially outward of an outer periphery of one of said slots so that the outer circumference

Serial No.: 10/725,375

circumferential surface of the stator core (11) does not contact the housing (31) in at least at each notch.~~the notch (18).~~

3. (Currently Amended) A motor comprising:

a housing;

a stator (10) having an inner circumference, comprising:

an annular yoke (16), a plurality of teeth; teeth (12)
~~disposed at an inner circumferential portion of the yoke and~~

a stator core (11) ~~formed with~~ having a plurality of slots
~~(13) between the plurality of teeth, each two adjacent teeth~~
having a slot therebetween, with three-phase concentrated winding
wires (14U, 14V, 14S) provided to wound around a portion of each
of the teeth; teeth, said stator having an outer circumferential
surface partially in contact with and held by the housing; and

a rotor (20) having an axis of rotation and rotatably held
in an opposed relation to an the inner circumference of said
stator (10) via with a small clearance therebetween, and provided
with comprising permanent magnets (22) inside embedded in or on a
surface of the rotor core; rotor;

Serial No.: 10/725,375

~~said stator core (11) having an outer circumference partly being in close contact with and held by a housing (31),~~

~~wherein a plurality of notches (18) are formed at an outer circumference of the yoke (16) located adjacent to an outer periphery of the slot (13), and the stator has a plurality of notches in the outer circumferential surface of the stator, and extending parallel to said axis of rotation and throughout the axial thickness of the stator, and located radially outward of an outer periphery of a slot so that the outer circumferential surface of the stator core (11) does not contact the housing at least at said notches. on an extension of an outer circumference of the stator core at a substantially central portion with respect to a peripheral direction of the slot (13).~~

Serial No.: 10/725,375

4. (Currently Amended) A motor comprising:

a housing;

a stator (10) having an inner circumference, comprising:

an annular yoke (16), a plurality of ~~teeth~~ teeth; and (12) ~~disposed at an inner circumferential portion of the yoke and~~

a stator core (11) formed with having a plurality of slots,
each two adjacent teeth having a slot therebetween, slots (13)
between the plurality of teeth, with three-phase concentrated
winding wires (14U, 14V, 14S) provided wound around a portion of
each of to the teeth ~~teeth~~, said stator having an outer
circumferential surface partially in contact with and held by the
housing; and

a rotor (20) having an axis of rotation and rotatably held
in an opposed relation to an the inner circumference of said
stator (10) via with a small clearance therebetween, and provided
with comprising permanent magnets (22) inside embedded in or on a
surface of the rotor core; rotor;

~~said stator core (11) having an outer circumference partly~~
~~being in close contact with and held by a housing (31),~~

Serial No.: 10/725,375

~~wherein the stator has a notch (18) is formed at an outer circumference of the yoke located adjacent to an outer periphery of the slot (13) a plurality of notches in the outer circumferential surface of the stator, and extending parallel to said axis of rotation and throughout the axial thickness of the stator, each of said notches being radially adjacent an outer periphery of a slot, so that the outer circumference circumferential surface of the stator core (11) does not contact the housing (31) at each notch; and the notch (18), axially penetrating through-holes (17) are provided in the yoke (16) located adjacent to outer circumferences of the teeth (12), and the outer circumference of the stator core located adjacent to an outer circumference of the through-hole (17) is in close contact with the housing (31).~~

~~a plurality of grooves extending parallel to said axis of rotation and throughout the axial thickness of the stator, each groove in the outer circumferential surface of the stator and located radially outward of one of said teeth, so that the outer~~

Serial No.: 10/725,375

circumferential surface of the stator does not contact the housing at each groove.

5. (Currently Amended) The motor according to claim 2, wherein ~~the notch (18) provided at the outer circumference of the yoke located adjacent to the outer periphery of the slot, is provided to be in a substantially arc shape to be each of the plurality of notches is~~ substantially concentric with the housing (31).

6. (Currently Amended) The motor according to claim 1, wherein when the number of teeth is assumed to be N, the stator core is in close contact with the housing in at least N/2 spots locations out of N spots locations on the outer circumference circumferential surface of the stator core ~~located adjacent to the outer circumferences of the teeth~~, radially outward of said teeth.

Serial No.: 10/725,375

7. (Currently Amended) An apparatus ~~loaded with~~ comprising
in conjunction therewith the motor recited in claim 1.